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Assessment of Stress Related Issues and Coping Mechanisms among College Students

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By

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This thesis has been examined and approved by the following members of the student's committee.

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Abstract

Assessment of Stress Related Issues and Coping Mechanisms among College Students

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The purpose of this research was to identify frequency of stressors and evaluate current levels of stress of undergraduate students. This study also analyzed and identified coping strategies implemented by college students. Two surveys were used in this study. The University Stress Scale developed by Stallman (2009) was used to identify perceived stressors and measure stress levels of participants. Brief Cope Inventory developed by Carver (1997) was used to assess coping strategies.

SPSS was used for data analysis and computation of scores. Academic/coursework demands was the highest perceived stressor among sampled undergraduates. Procrastination, study/life balance, finances and money problems were also identified to have caused significant stress over the past month. The most common coping strategy among the study sample was active coping. Denial was the least common strategy used. Overall, female students were more likely stressed than male students. Recommendations for further research include conducting this study among a broader scope of students including graduate students and inclusive of more racial groups.

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Chapter One- Introduction

Introduction

Stress contributes to health problems worldwide. Its presence is felt at home, office, industry, and academic environments. Stress is regularly experienced by all individuals regardless of age, culture, or geographic location. Although the effects of stress on an individual are not always harmful, daily hassles and major life events can significantly impede a person's optimal functioning (Kaufman, 2007).

College has been found to be stressful for many young adults enrolled (Pierceall & Keim, 2007). Students' psychological discomfort is reflected in several ways including depression, anxiety, stress, and sleeping disorders (Petrov, Lichstein, & Baldwin, 2014). The transition to college from high school tests young adults to live independently, handle finances, maintain academic standards and integrity, and adjust to a new social life. It also provides an opportunity to modify existing roles (for example, son or daughter) and to adopt new roles (for example, college student).

Millennials (ages 18-33 years) as a generational group have the highest levels of stress of any other age group, with 39% reporting that their stress has increased in the last year (American Psychological Association, 2013). During this transitional process, college students establish a foundation for future life goals (Salmela-Aro, Aunola, & Nurmi, 2007). Stress during this life transition may be particularly salient when considering academic achievement. Currently, 25% of college students drop out after

their first year, and only slightly more than half of the students attending 4-year institutions complete their baccalaureate degrees within 6 years of their first enrollment (National Center for Educational Statistics, 2008).

Stress among undergraduate and graduate students is multifactorial, arising from both academic and non-academic factors, including socio-cultural, environmental, and psychological attributes (Brand & Schoonheim-Klein, 2009). Psychosocial stress is high among freshmen, women, and international students because of the adjustment they must make in their social, academic, and cultural lives in a new environment, having left all previous support persons such as parents, siblings, and high school friends (Seyedfatemi, Tafreshi, & Hagani, 2007). College students are faced with loneliness, anxiety, depression, and disorientation. Also, previous studies have shown that poor coping strategies and variations in personality types may contribute to additional stress in certain individuals, leading to a negative pattern of behavior, development of psychosomatic symptoms, and decreased academic performance (Busari, 2011).

Psychosocial, individual, and physical stressors are also encountered often in an academic environment. Individual variables that can influence one's response to stress include age, sex, physical-ability status, lifestyle (smoking and alcohol-drinking habits), ethnicity, adiposity, and genetic predisposition. Previous studies have shown that variability in students' maturity (such as the complete development of the prefrontal cortex, which is the area of the brain responsible for decision making) is related to greater variability in their strategies for coping with stress (Kagan, & Baird, 2004). Also, physical stress imposed on the body includes poor study posture and sitting on chairs

improperly in overcrowded classes, which could produce muscle strain and joint imbalance, and soft-tissue stresses. This could become habitual, leading to more chronic, recurring pain and episodes of pain (Ekpenyong, Daniel, & Aribo, 2013).

Statement of Problem

Stress is a significant risk factor for the development and growth of numerous physiological and psychological problems (Muscatell & Eisenberger, 2012). In the United States, there are approximately 90 million visits to outpatient departments yearly, which averages at 30 visits per 100 people (Hing, Hall, Ashman, & Xu, 2010). Stress has also been linked to all the major leading physical causes of death (Cohen, Janicki-Deverts, & Miller, 2007).

College life for many students can be both challenging and exciting. Students are placed into rigorous academic curriculum while at the same time trying to establish who they are socially, mentally, financially and often geographically (Lynch, Gander, Kohls, Kudielka, & Walach, 2010). As a result, students experience increased levels of stress and anxiety, making them a vulnerable population (Lynch, et al., 2010). Due to this enormous pressure, students may develop anxiety disorders, which may inhibit their performance level mentally, emotionally, socially and academically (Lynch et al., 2010).

Research has been conducted to review the relationship between stress and academic performance of students and it has been found that stress affects the academic performances of students in great manner (Choi, Abbott, Arthur, & Hill, 2007).

According to Oman, et al., study (as cited in ACHA, 2006), one-third (32%) of the nearly 50,000 students surveyed at 74 U.S. campuses revealed stress was the most commonly identified impediment to academic performance. With these on record, more research focus should be placed on college students who are still in transition to college and ongoing in their academics.

As more research is conducted to investigate stress and stressors affecting college students including more effective means of coping**,** this research is expected to make a valued contribution by gathering a deeper understanding on identifying stress related issues and coping among college students.

Need for the Study

This study is needed because it is often heard and seen of college students to complain of being stressed during the academic year, a lot of students are used to handling stress by themselves, implementing various coping mechanisms, some unhealthy to regain control. This topic is important to the health education discipline because it will identify healthy behaviors that can be implemented for college students to address stress related issues. It will also improve health educators' knowledge of college students stress, effects of stress on behaviors and provide adequate resources to address such issues.

Recent research has indicated that the effects of stress on college students are substantial. An American College Health Association survey of more than 16,000 college students found that 33.7% reported that stress interfered with their academic

performance, as evidenced by missing classes, receiving lower grades, or dropping courses (Chiauzzi, Brevard, Thurn, Decembrele, & Lord, 2008). Stress has been shown to play a tremendous role in students' decision-making regarding remaining in school or not. Stress has been linked to increased attrition as well as problems with academic performance (Chiauzzi, et al., 2008). Stress is also related to sleep difficulties, psychiatric disorders, substance abuse, and high-risk behaviors, and it takes on an important role in a student's decisions regarding staying in school (Chiauzzi et al., 2008). It has been shown that the level of stress for college students has been increasing in recent years and the use of medication has increased fivefold (Schwartz, 2006).

Research shows that academic stress leads to poor performance which may in turn affect career aspirations of college students. However, many students do not seek help for the problems they are experiencing, mainly due to a having a lack of time to do so and the stigma attached to counselling (Eisenberg, Golberstein, & Gollust, 2007). Given the above situation, identifying various stressors, and the impact of stress on academic performances of students would be helpful to health educators when providing psychological support and counseling to affected students while the different coping mechanisms explored will provide information for corrective measures to be applied when faced with stress.

Research Questions

Three research questions were analyzed in this study. These questions include:

a. What are the frequencies of common stressors as perceived by college students at a large midwestern university?

b. What are the stress-reducing coping strategies commonly used by male and female college students?
c. What are the current stress levels of college students at a large midwestern university?

Limitations

a. Participants may display social desirability by responding to survey questions in a way that makes them seem more favorable.
b. Participants may have decided to be hesitant due to the sensitive nature of the topic or fear of being victimized. Participants may feel reluctant to share their challenges even though they remain anonymous
c. Due to time constraints, a study was not conducted to compare the stress level of students in various undergraduate programs.
d. The survey instrument used to measure stress had its pilot tests on students in Australia while this current research is focused on students in USA.

Delimitations

a. Data was collected with primary focus on undergraduate students at a large Mid-western university.
b. Both domestic and international students were included in the study sample.

Assumptions

a. Participants understood questions listed on the survey and answered honestly.
b. Participants understood directions on how to complete the survey.

c. Participants are representative of students in the university and other students.

Definition of Terms

a. Coping: An activity we do to seek and apply solutions to stressful situations or problems that emerge because of our stressors.

b. Coping Mechanism: Methods by which administrators cope with stress encountered because of the school environment and the resulting areas of responsibility (Queen & Queen, 2004).

c. Stress: The American Psychological Association (2013) described stress as the pattern of specific and nonspecific responses an organism makes to stimulus events that disturb its equilibrium and tax or exceed its ability to cope.

d. Stressors: A stressor is anything that causes the release of stress hormones. There are two types of stressors which include Physiological (physical) stressors and psychological stressors (Center for Studies on Human Stress, n.d).

Chapter Two- Literature Review

Introduction

The purpose of this research is to identify frequency of stressors, evaluate current levels of stress and identify coping strategies implemented by sampled Minnesota University, Mankato undergraduate students. In this chapter, literature reviews on impact of stress, major sources of stress will address the importance of research of stress and coping among college students. In addition, this chapter will address subtopics including types of stress, perceived stress, and symptoms of stress and health belief model.

Definition of Stress

Marksberry (2011), defined stress as a condition or feeling experienced when a person perceives that the demands placed on them exceed the resources the individual has available.

According to Feldman (2008), stress is the physical and emotional adaptive response to an external situation that results in physical, psychological and behavioral deviations. Examples include financial difficulties, health issues, conflict with friends, all carry force or pressure on person's body, mind and spirit. Some of the pressure may arise from the environment but most often comes from within a person's head in the form of regret, discouragement, low confidence, worry, and anxiousness.

Pargman (2006) described stress as “an uncertain reaction to external and internal factors” meaning a negative or positive reaction to environmental stimuli (p. 5). It is how the whole of your body relate to changes and strange situations that present itself. During

this period, vital signs such as pulse rate, blood pressure, body temperature and breathing rate in the body react speedily (American Heart Association, 2017) and several hormonal responses are at peak (Ranabir, & Reetu, 2011).

Stress is a serious problem in college student populations across the United States (Knöll & Moar, 2011). Students' psychological distress is reflected in several ways including depression, anxiety, stress, and sleeping disorders (Boulard, Quertemont, Gauthier & Born, 2012).

Perceived Stress

In college years, young adults are responsible for their health, academics, and financial situation. According to the American College Health Association's National College Health Assessment (2010), stress, sleep disturbances, anxiety, and depression are among the top five threats to academic performance among college students.

A study by Pierceall and Keim, (2007) showed 75% of the college students perceive stress at a moderate level, and 12% had a high level of stress. One study found that one in three undergraduate college students display clinical levels of distress (Bewick, Gill, Mulhearn, Barkham, & Hill, 2008). Universities are important settings in which mental health concerns such as depression must be addressed given that approximately half of young adults attend post-secondary education.

Most college freshmen that have moved away from home, including international students will experience a separation (physically and emotionally) from their parents, possibly reducing their interaction and support from family and friends. Given these factors, university students are a special group of people that are enduring a critical

transitory period in which they are going from adolescence to adulthood and can be one of the most stressful times in a person's life (Buchanan, 2012). The transition into a post-secondary school has been reported to be associated with appetite disturbance, concentration problems and depression (Lee, Olson, Locke, Michelson & Odes, 2009). Homesickness is a direct byproduct of this transition that affects university students, mainly freshmen (Thurber and Walton, 2012), and is therefore an important focus for universities consideration.

Several research studies have demonstrated high prevalence of stress among university students (Britz & Pappas, 2010; Gan, Nasir, Zalilah & Hazizi, 2011; Stallman, 2010). In a review of studies in stress among university students globally showed among Malaysian university students, stress was observed among 36% of the respondents (Gan et al., 2011). Another study reported that 43% of Hong Kong students were suffering from academic stress (Wong, Cheung, Chan, Ma & Wa Tang, 2006). However, a much higher prevalence of stress was observed among students in western countries and in other Middle Eastern countries, including 70% in Jordan (Abu-Ghazaleh, Rajab & Sonbol, 2011), 83.9% in Australia (Stallman, 2010) and furthermore, in Singapore, about 50% of university students accounted elevated stress (Zain, Chan & Ho, 2007).

Stress related to racial or ethnic minority status has been examined primarily with African Americans (Greer, Laseter & Asiamah, 2009; Hunter & Joseph, 2010), but a growing amount of research has begun examining race-related or minority status stress with Asian Americans (Iwamoto & Liu, 2010), and ethnic minorities in general (Franklin, Boyd-Franklin & Kelly, 2006).

Detrimental impacts of stress

Depression

Kring, Davison, Neale, & Johnson (2010) states "Depression is an emotional state marked by great sadness and apprehension, feeling of worthlessness and guilt, withdrawal from others, loss of sleep, appetite and sexual desire, loss of interest and pleasure in usual activities".

Depression is considered as multi-problematic that leads to impairment in inter-personal, social, and occupational functioning and is often among college students (Farabaugh et al., 2012; Ibrahim, Kelly, Adams & Glazebrook, 2013). Depression among college students is common and consequential as adverse outcomes include increased rates of substance use, comorbid with psychiatric conditions such as anxiety, and suicide (Garlow et al., 2008). University students are at expanded danger of depression owing to the pressure and stress they encounter (Ghaedi, Kosnin, & Mislan, 2014). A survey from the American College Health Association (ACHA, 2012) found that of the 17,000 college students participating, 25% reported they experienced depression three to eight times in the past 12 months.

Considering prior studies, the prevalence of depression among college students varies largely across settings, depending on cultural backgrounds and study instruments (Ibrahim et al., 2013). Several studies have found that the rates of depression ranges from 7.6% to 22% among American and Indian young adults (Roberts, Glod, Kim & Hounchell, 2010; Sidana et al., 2012) and from 3.7% to 14.8% among Chinese college

students (Jin et al., 2009). These findings have prompted an awareness of how severely college students endure stress during their academic years (ACHA, 2012).

Anxiety

Common symptoms that characterize anxiety are excessive worrying include exaggerated worries and expectations of negative outcomes in unknown situations that typify anxiety are often accompanied by physical symptoms. These include muscle tension, headaches, stomach cramps, and frequent urination. The 2015 National College Assessment Survey revealed that within the last 12 months, stress (30%) and anxiety (21.9%) were the two biggest factors that affected students' academic performance negatively ACHA, 2015).

Holm, Hofmann, Sperth, & Funke (2009) carried out a study in University of Heidelberg to indicate which disorders and psychological problems were more often occur in students who counseled a psychotherapeutic center. Around 60- 65% of the students experienced clinically relevant psychological disorders. Exam anxiety was the most widespread issue in student population

Insomnia

The American National Commission of Sleep Disorders Research (NCSDR) defines insomnia as "a chronic or acute sleep disorder characterized by a complaint of difficulty initiating, and/or maintaining sleep, and/or a subjective complaint of poor sleep quality that result in daytime impairment and subjective report of impairment (NSDR, 2011). Studies conducted in the United States (Gaultney, 2010) and Hong Kong (Wong &

Fielding, 2011) report approximately 70 million and 2.2 million people complain from symptoms of insomnia respectively.

A systematic review of 7 studies by Jiang et al. (2015) shows that the prevalence of insomnia among university students is ranging from 9.4% to 38.2%. Furthermore, 32.5% to 62.3% university students in Nigeria, Libya, and Egypt suffered from insomnia (Ibrahim & Abouelezz, 2012, James, Omoaregba & Igberase, 2011, Taher, Samud, Ratinmy & Seabe, 2012). In addition, people with insomnia symptoms in the general population are also at a higher risk for developing depression, anxiety, substance abuse or dependence, suicide, and cardiovascular disease (Taylor et al., 2011). At least 3 days a week, 60% of students report that they are dragging, tired, or sleepy (ACHA, 2012).

Indeed, in spite of the fact adults are recommended to sleep 7 to 9 hours per day, college students rest less than typical resting hours (Brick, Seely & Palermo, 2010). The social environment, busy class schedule, change in sleeping environment, experiencing noise at night, and participating in night party alter the sleep quality and cause academic failure as a result (Eslami, 2012; Ogbolu, Aina, Famuyiwa & Erinfolami, 2012). College students experience predictable, stressful life events during the school year that can lead to sleep deprivation and further endanger their wellbeing. Most students may sense the stress derived from school work; however, they may not realize that sleep deprivation is also a stressor in addition to their daily life stress, and altogether could have negative impacts on their physical and mental health (Lee, Wuertz, Rogers, & Chen, 2013).

Substance use

Substance use occurs when a person's use of alcohol or another substance (drug) leads to health problems. This disorder is also called substance abuse. Many who develop a substance use problem have depression, attention deficit disorder, and anxiety. Many people who are vulnerable to depression or anxiety use tobacco because they expect smoking to relieve negative affect (Morrell, Cohen, & McChargue, 2010). Because of peer pressure and accessibility of substances (alcohol, drugs, tobacco such as cigarettes), substance abuse by students is inevitable.

A comprehensive research study by Boehm, Lei, Lloyd & Prichard, (2016) demonstrated that tobacco use, and depression/anxiety disorders are both independently associated with more sleep problems in college students, and those students with depression/anxiety are more likely to use tobacco, a behavior that likely exacerbates their sleep problems. In their study, 56% daily tobacco users with depression and anxiety reported that sleep problems negatively impacted their academic performances, revealing daily tobacco use was associated with increased academic problems caused by sleep problems.

Negative impact of stress

Impact of stress on Academics

The academic performance of university students presently is defined in terms of success or failure of course units, number of courses failed or passed (Goldfinch & Hughes, 2007), and the quality of the grades obtained in terms of the Grade Point

Average (GPA) or Cumulative Grade Point Average (CGPA) (Bernold, Spurlin, & Anson, 2007). College students who are stressed out may produce low grades, lethargic attitude to school work and may skip classes often. Most times, college work involves thinking and brainstorming which may be cumbersome, a student affected by stress may have difficult thinking, easily misunderstanding things, confusion and constantly having a negative attitude towards school. Furthermore, previous studies revealed continual evidence regarding stress in college students affecting cognitive processing, concentration and problem solving. These effects decrease an individual's academic performance, learning ability and retention (Goff, 2011).

Impact of stress socially

College is a time for social interactions, building friendships and relationships, host of parties and events. Social relations are at its peak during college years, boosted with the use of mobile technology and social media applications. When students get stressed, there is a visible sign of frustration, snap at friends and family, or feel annoyed by the minutest things. Stress can also affect emotional intelligence. Emotions serve as part of our regulatory system – when functioning appropriately they assist us to carefully evaluate impacts on ourselves and others. When they're shut off, we make more dangerous choices. Emotions assist decision-making (Freedman, 2013).

Major sources of stressors

Stress is multidimensional and complex, induced by certain factors. In this research, stressors will be grouped in two phases: i) Academic (ii) Non-academic Stress etiology of stress is complex and varies across environments.

Academic stress

College students are individuals who manage an extensive variety of academic, individual and social difficulties. In this way academic stress is considered as one of the most predominant risk factors in university students (Waghachavare, Dhumale, Kadam, & Gore, 2013). College students face very demanding circumstances during the pursuit of their college degree. Furthermore, the following were identified to be associated to academic stress based on studies: academic workload, attending lectures (Agolla & Ongori, 2009), examinations, school curriculum and inadequate learning materials (Shah, Hasan, Malik, & Sreeramareddy, 2010), subject-related projects (Conner, Pope, & Galloway, 2010). Additionally, high expectations and demands of teachers and parents may lead to enormous stress. Financial difficulties and worry of future career are also stress inducers (Mazumdar, Gogoi, Buragohain, & Haloi, 2012). According to Feld (2011), significant stressors encountered by students include high individual and external expectations, and stressful surroundings as well as academic motivators such as academic tasks, ranks and college recognition.

In the view of Ekpenyong, Davis, Akpan, & Daniel, (2011), students report the greatest sources of academic stress to be taking and studying for examinations with

respect to grade competition and mastery of a large amount of information in a small amount of time. Symptoms of stress can be examined in students during examinations. A study by Sarid, Anson, Yaari, & Margalith, (2004) reported that stress induced by examinations keeps increasing during preparation, peaks during the exam, and declines after the test is over.

An overview of the existing literature also shows some other indications of stress like feeling anxious, gazing into space, working too fast but wrongly, working very slowly but properly, postponing assignments, depression over past failures, and procrastination in studies and feeling helpless over an uncertain future. Some physiological indications can also be observed like increased respiration and heartbeats, heightened muscle tension, blood pressure and gastric discomfort (Parson, 2008).

Non- Academic Stress

Most college students are at the point in their lives where they make certain choices, begin new experiences, meet new people and face fresh challenges as they seek to develop and progress in life. Bernstein et al. (2008) defined the sources of stress as every circumstance or event that threatens to disrupt people's daily functioning and causes them to adjust.

Relationship Stressor

Many individuals begin serious dating relationships during what has been termed "emerging adulthood." Emerging adulthood is a phase of development in which youths actively pursue physical and psychological independence and autonomy from their family

while concurrently maintaining emotional and material support needed for adjustment and well-being (Arnett, 2007). Relationship stress experienced by college students include trust issues, unfaithfulness, insecurity and relationship abuse. The transition from leaving high school to entering college may be a time of increased vulnerability, given that youths entering college often must navigate increasingly adult roles, take on new academic and economic responsibilities, and forge new social networks (Aquilino, 2006; Laursen, & Collins, 2009). Relationship problems were listed as the third leading source of stress according to the ACHA (2012).

A study by Petroff (2008) found a negative correlation between stress and relationships. The findings reveal that if a couple is happy and share a healthy relationship, stress is decreased. On the contrary, stress increases when a relationship faces difficulties.

Financial Stressor

College students may become frustrated when bills are overdue, threat of account going to collection and racking up debt through loans and credit card debt. Credit cards have become readily available and could be gotten by a single click and filling an application on the internet. Previous research showed that debt and financial problems of adolescents and young adults in Western countries have increased over time (Betti, Dourmashkin, Rossi, & Ping Yin, 2007). With rising college costs, young adults have become vulnerable to borrowing and become a risk of becoming in debt, in the last decade, student loans have increased together with tuition fees (National Center of Education Statistics, 2010).

Financial debt has been found to affect young adults mentally with damaging consequences. A research by Dwyer, McCloud, & Hudson (2011), in a sample of young adults found some evidence to suggest that credit card debt has negative consequences on a sense of mastery and the level of self-esteem over time, possibly because financial stress adds up as young people age. Furthermore, a survey focusing specifically on financial stress found that four of the five most common stressors among students related to their personal finances (Trombitas, 2012). First-year students more often experienced ‘’extreme stress’’ related to the cost of education and living than other students. A third of students reported that finances negatively influenced their academic performance. Additionally, one out five students reduced the number of courses they enrolled in due to their finances.

A credit card debt over $1,000 is considered risky for college students and has been linked with unhealthy behaviors such as declined mental and physical health (Berg et al. 2010), high stress levels, low financial well-being (Nelson, Lust, Story, & Ehlinger, 2008) abusing drugs and alcohol (Berg et al. 2010). According to Kozubik, Kozubikova & Rybicka’s study (as cited in Sallie Mae, 2009), this trend is alarming because 84 % of students have a minimum of one credit card, and half of the students hold four or more cards with an average total credit card debt of $3,170. Even more alarming is a pattern which shows that more cards bring more debt, and more debt brings more cards (Norvilitis, & MacLean 2010).

Tuition and accommodation costs are one of the most important considerations college students make during the search for schools. Tuition fees and affordability could

be a deal-breaker for students and parents before enrollment and during their academic journey. One potential source of financial stress for college students is tuition costs.

Tuition and fees at colleges and universities continue to rise more rapidly than the rate of inflation. Bousquet (2008) noted that, during the 1960s, a student could have worked 15 hours a week at minimum wage during school and 40 hours a week during the summer to pay his or her public university education. According to the American College Health Association (2012), financial problems is listed as the second leading source of stress in USA. With college tuition fees on the rise and lack of scholarships, many university students are buried in debt (Banu, Deb, Vardhan & Rao, 2015)

Unhealthy Eating Habit

According to the Physicians Committee for Responsible Medicine (2015), unhealthy eating habits have the tendency to increase a student's level of stress. Diets that can induce stress include food high in fat, sugar, caffeine and refined starches. It is encouraged that a healthy diet with provision of fruits, vegetables and low-fat food will be efficient for a student (Kessler, 2016). High perceived stress has been associated with worse diet quality (Fowles, Stang, Bryant & Kim, 2012) greater intake of snack foods and lower intake of fruit (El Ansari, Adetunji, & Oskrochi, 2014).

A study by Ahmed, Radhwan, Azmi, & Beajan (2014) examined degree and the relationship between dietary practices and academic stress among students in University of Kuwait. Moderate level of stress was experienced by 43% of university students, in that with a little more 44% were females and 40.9% were males. Moreover, academically stressed female students were vulnerable to eat more snacks, high cholesterol foods and

beverages than without stressed females. Contrast findings were showed in male students that type of food consumption was not coupled with academic stress. Gan, Nasir, Zalilah, & Hazizi (2011). highlighted the presence of unhealthy eating behaviors and inadequate nutrient intake among university students.

Employment

Many college campuses offer on-campus job positions for students to make extra income during their period of studies. It is also common to find students working flexible hours, depending on their schedule or trying to make financial ends meet. While working during school is encouraged and legal, a demanding routine and schedule at work can be detrimental to students. Students may find themselves leaving work and heading straight to the library to complete assignments, read for a quiz or contribute to online coursework. This added weight of demands may increase stress levels, lead to confusion and consequently lead to fatigue. It is encouraged that students plan a schedule to accommodate both work and school commitments adequately while making provisions to rest and refresh themselves.

Environment Factor

The environment can play a major role in making students stressed. International students tend to pass through an acclimatization stage where they deal with culture shocks, weather differences including high temperatures and sweltering temperatures and political climates. News, policies and tensions in the society can make students worried for their future and may cause them to lose their focus. In the United States, immigration decisions and announcements are triggers that could unsettle students, prompting the

university community to send emails to assure students of a safe and conducive environment for study.

Adverse academic environmental factors such as poor lighting, extreme temperature, and noise can also increase the risk of injury and subsequent development of musculoskeletal disorders. Physical stress imposed on the body includes poor study posture and sitting on chairs improperly in overcrowded classes, which could produce muscle strain and joint imbalance. This could become habitual, leading to more chronic, recurring pain and episodes of pain (Ekpenyong, Daniel, & Aribo, 2013).

Parental Pressures

Parental pressures and teachers' expectations have been revealed to be associated with stress around the time of examinations or about choosing academic study or a future career. For example, students who joined dentistry due to parental pressure, with associated fear of facing parents after failure, described greater stress than those who joined of their accord (Tangade, Mathur, Gupta, & Chaudhary, 2011). The recommendation is parents need to be counseled against forcing their children to join an educational program, not of their choice (Tangade et al., 2011)

Coping Mechanisms

Coping is recognized as a key variable in the process of minimizing, reducing or tolerating stress (Gustems-Carnicer & Calderon, 2013) and among college students, coping has been found to be a strong predictor of academic success (Barrows, Dunn, & Lloyd, 2013). Coping refers to the thoughts and behaviors people use to manage the internal and external demands of stressful events (Folkman, 2010). Numerous coping

strategies have been identified in previous research studies and include both healthy and unhealthy approaches such as positive methods including seeking social support (Timmins, Corroon, Byrne, & Mooney, 2011; Pabiton, 2007) or using leisure activities (Mapfumo, Chitsiko, & Chireshe, 2012) while others use maladaptive strategies (e.g. escape/avoidance) to manage stress (Chao, 2012).

Coping refers to the thoughts and actions people use to manage distress (emotion-focused coping), manage the problem causing the distress (problem-focused coping), and sustain positive well-being (meaning-focused coping). Emotion-focused coping includes strategies such as distancing, humor, and seeking social support that are generally considered adaptive, and strategies such as escape-avoidance, day dreaming, and blaming others that are generally considered maladaptive. Problem-focused coping includes strategies such as information gathering, seeking advice, drawing on previous experience, negotiating, and problem solving (Folkman, 2013)

Physical Activity

Researchers have documented the benefits of regular physical activity for a healthy life. Regular physical activity reduces the risk of hypertension, heart disease, diabetes, and some cancers (Allender, Hutchinson, & Foster, 2008). College students between the ages of 18 and 25 have the lowest amount of regular physical activity compared with other adults. On average, they engage in less than the recommended daily 30 min of moderate to vigorous exercise (Centers for Disease Control and Prevention, 2010). Some of the documented techniques for relieving stress include physical activity (Hegberg, & Tone, 2015) and progressive muscle relaxation (Chen et al., 2009; Smith, 2007). Often

when stressed, individuals take a defensive posture via standing, crouching, or bending over a desk for an extended period. To help relieve physical tension, stretching exercises target stressed posture and positioning (Smith, 2007).

Meditation

Meditation is described as a tool that involves concentrating on one single thought and involves having a passive attitude (Wallace, 2007). This procedure aids in minimizing stress by enabling a cool focus on one simple task at a time. Mindfulness is defined as awareness and focused attention, absence of elaborative thought, and nonjudgmental acceptance (Carmody, & Baer, 2008). Mindfulness provides a strong solution to the common causes of daily stress such as time pressure, agitation, distraction and interpersonal conflicts. (Clinic Community Health Centre, 2010).

Among college students, many pursue healthy coping methods to decrease stress: effective time management, social support, positive reappraisal, and engagement in leisure activities (Rayle, & Chung, 2008). Effective application of time management skills can be linked with academic achievement (Pehlivan, 2013; Al Khatib, 2014; and Tanrıöğen, & Işcan, 2009), stress reduction (Tanrıöğen, & Işcan, 2009; Wahat et al, 2012), increased creativity (Yaghoobi et al, 2014) self-efficiency (Terry, & Doolittle, 2008) and satisfaction of students (Kebriaei, Sabahi, & Saeedi, 2014). A good example is, some productive study methods emphasize starting assignments well before due dates, breaking down large tasks into small ones, and having a timetable for reading on a regular schedule to maximize productivity in a timely manner.

Emotional support has been proven to be an effective stress management technique since individuals increase instrumental help, emotional support, or social diversion such as venting to family and friends (Kahn, & Garrison, 2009). Another common technique among college students is leisure satisfaction which is defined as the positive feeling of contentment one perceives because of meeting personal needs through leisure activities and has an inverse relationship between perceived academic stress (Balduf, 2009).

Another strategy for coping is spirituality which provides a cognitive framework for reducing stress among college students (Ridnour, & Hammermeister, 2008). Religious methods and other spiritual endeavors as coping strategies when encountering physical and mental difficulties in life are widely recognized (Cruz, et al., 2016; Wachholtz, & Sambamoorthi, 2011). Spirituality and religion are the most accessible and readily available resources to help in coping with stressful life events (Cruz, et al., 2016). Furthermore, spiritual coping can enhance feelings of wholeness and a state of equilibrium, promoting good health (Hawthorne, Youngblut, & Brooten, 2011).

Health Belief Model

Health Belief Model (HBM) is a model that assists in explanation of decisions made by people with regards to personal health status. This research will utilize the Health Belief Model (HBM), which is a theoretical framework used to explain, predict, and influence various health behaviors (Glanz, & Rimer, 2005). The Health Belief Model is made up pf six constructs: Perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy.

The HBM is based on an understanding that the students will take a health-related action to minimize the stress level (for instance exercise regularly) if they feel that stress can indeed be avoided in school, positively expect that by observing the suggested action plan will result in reducing stress and believe that they can take a recommended health action successfully such as exercising regularly, comfortably, and with confidence.

Chapter Three- Research Methodology

This chapter describes the research design, instrumentation, data collection procedures, and subjects are described along with processing, and data analysis. Sufficient detail will be included in the presentation of methodology so that replication of this study would be possible. The study also examined if a relationship existed between variables regarding gender and coping strategies implemented by the students.

Research Questions

Three research questions were analyzed in this study. These questions include:

a. What are the frequencies of common stressors as perceived by college students at a large midwestern university?
b. What are the stress-reducing coping strategies commonly used by male and female college students?
c. What are the current stress levels of college students at a large midwestern university?

Research Design

A descriptive research design will be used to collect quantitative data using a survey from a sample of university students between the ages of 18 and 25 years at a large midwestern university during the spring semester of 2018. Quantitative design is appropriate when knowledge and facts are measurable. An advantage of using a descriptive research design is it answers to the questions of who, what, when, where, and how associated with a research problem. It is also advantageous for its approach of collecting large amount of data for detailed analysis. (Labaree, 2017). Furthermore,

descriptive research can provide a representation of what is happening at a specific time (Stangor, 2012). A descriptive research design was selected because the research questions are descriptive in nature and it also describes perceived stress, coping mechanisms, stressors and stress levels presently in the sample for this study.

A cross-sectional design was chosen due to the limited time for the study and collection of data and the limited budget for this study. Furthermore, a cross-sectional design entails collecting data at one point in time and it focuses on studying and drawing inferences from existing differences between people or subjects (Labaree, 2017). The advantage of using cross-sectional design research is it can use data from many subjects, it is not geographically bound. (Labaree, 2017).

In this study, convenience sampling of 350 students will be used. Sample size was calculated with a population size of 15000, margin of error of 5% and confidence level of 95%. Participants were undergraduate students enrolled at Minnesota State University, Mankato. A convenience sampling was used for this study because of the limited budget, time frame and easy availability to recruit subjects.

The study will be administered to undergraduate students enrolled in general education classes. General education classes were chosen because they offered diverse sample (race), age differences and convenient access. For this study, there was no selection criterion, both international and domestic students in Minnesota State University, Mankato were included, also in other to have balance gender equality both male and female will be considered in this study.

Instrumentation

Survey instruments have been found to be very effective at describing the characteristics of a population.

The University Stress Scale (USS)

The University Stress Scale (USS) has 21 items designed to measure the severity of stress experienced by university students. (Stallman, 2008). The survey was developed to allow identify stressors experienced by students. It provides an index of the intensity of an individual's stress experienced in the previous month The USS scale is structured using only broad category headings rather than specific events or situations which ensures a student's individual experience as to what the stimulus is not limited. Furthermore, the scale includes not only demands that cause significant stress for most students (e.g. coursework), but also those that may only be experienced by minority groups such as international students or students who are parents (Stallman, & Hurst, 2016)

The categories of items included in the USS scale were selected through topics identified in focus groups of both students in general and, specifically, international students (Khawaja, & Stallman, 2010; Ryan et al., 2010). The survey instrument incorporated a Likert scale to gather data pertaining to stress factors among the sample.

However, one limitation of The USS is the scale had its pilot tests in Australia. Therefore, the problems faced by students in Australia may not be applicable to students in USA due to various reasons.

Brief COPE Inventory

The COPE Inventory was developed to assess a wide range of coping responses. It is based on the coping model developed by Lazarus & Folkman, (1984) and the behavioral self-regulation model developed by Carver & Scheier (2012). The COPE Inventory has 60 items, comprising of 15 subscales (four items per scale), each with a specific theoretical focus. The COPE Inventory has recorded psychometric properties including high values of Cronbach's alpha, test-retest reliability, and significant correlations with external variables have been reported (Carver, Scheier, & Weintraub, 1989). The Cronbach's alpha relatability coefficient results were acceptably high, with the mental disengagement scale falling below .6. Several self-report measures of coping responses exist but one possible weakness of these scales is their lengthy approach, ranging from 48 to 66 items, which respondents may find tasking therefore limiting their utilization in research protocols.

To overcome this potential shortcoming, Carver (1997) developed the Brief COPE, an abridged version of the COPE. The 28-item Brief COPE (consisting of 14 subscales) has adequate psychometric properties and has been used extensively to examine the relationship between various coping strategies and psychological outcomes in other populations (Cooper, Katona, Orrel, & Livingston, 2006).

The Brief COPE measures 14 theoretically identified coping responses: religion, active coping, use of emotional support, use of instrumental support, self-distraction, venting denial, positive reframing, substance use, use of emotional support, behavioral disengagement, acceptance, and self-blame (Monzani et al., 2015). It represents a way to

rapidly measure coping responses because it is a short 28-item self-report questionnaire with two items for each of the measured coping strategies. Each item presents a coping action that individuals may adopt under stress or in difficult situations. For each item, respondents specify whether they have used the coping response on a four-point multiple choice scale (1 = I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot). The items of the original version of the Brief COPE were in a format that was situational and retrospective, allowing for the assessment of situational coping responses to specific stressors (Monzani et al., 2015).

Carver's instructions of the Brief COPE adopt a procedure like the one developed by Folkman & Lazarus (1980). Specifically, the Brief COPE asks participants to recall a relevant stressor they encountered in the recent past and to indicate how they coped with it. Accordingly, the items of the situational version are expressed in the present perfect tense (Monzani, et al, 2015). The Brief COPE has recently been used in empirical research evaluating the role of coping in facing different types of stressors, such as heart failure (Paukert, LeMaire, & Cully, 2009), HIV disease (Sanjuán, Molero, Fuster, & Nouvilas, 2013), terrorism (Stein et al., 2013), and caregiving for a family member with mental illness (Wrosch, Amir, & Miller, 2011).

Data Collection

Permission will be obtained in advance from the instructors of General Education (Gen-Ed) classes by email or in-person dialogue to distribute surveys in their respective classes. These courses are part of the mandatory 12 General Education (Gen-Ed) classes

by goal areas that are set in place at Minnesota State University, Mankato. Surveys were distributed by the student researcher to participants in person during the class periods offered at various times. A breakdown of the study and consent form (Appendix B) was read audibly to the students before participation. The researcher also gave students a copy of the consent form to keep for their resources. These consent forms met the approval of the Institutional Review Board of Minnesota State University, Mankato. (Appendix C). The survey took fifteen-twenty minutes to complete.

Data Processing and Analysis

The following includes how the survey instruments and statistical analysis were used to answer each research question.

What are the common stressors as perceived by college students at a large Mid-Western University?

This research question was analyzed using data from the survey questions from the University Stress Scale. The questions addressed severity of stress and different stressors experienced over the past month. Descriptive statistics including frequency counts and percentages were used to answer this question.

What are the stress-reducing coping strategies commonly used by male and female college students?

This research question was analyzed using survey questions from the BRIEF scale. A frequency distribution and descriptive statistics were used to answer this

question. The high mean score was used in determining the most frequently used type of coping mechanism.

What are the current stress levels of college students at a large Mid-Western University?

This research question was analyzed using survey questions from the University Stress Scale. Descriptive statistics including percentages, frequencies and measures of central tendency and dispersion were used to answer this research question.

Table 1

Table of Specifications

Research Question (RQ)	Survey items or scales used to assess RQ'S	Level of Data (Nominal, Ordinal, Interval/Ratio)*	Analysis needed to assess RQ
What are the common stressors as perceived by college students at a large, Midwestern university?	- Individual items of the University Stress Scale - Extent score (total summated score) of University Stress Scale	- Ordinal data (individual survey items) - Interval/Ratio data	- Descriptive statistics including percentages, frequencies, and measures of central tendency and dispersion
What are the stress reducing coping strategies commonly used by male and female college students?	- Brief COPE Inventory	- Ordinal data (individual survey items)	- Descriptive statistics including percentages, frequencies, and measures of central tendency and dispersion
What are the current stress levels of college students at a large , Midwestern university?	- Individual items of the University Stress Scale - Extent score (total summated score) of University Stress Scale	- Interval/Ratio data	- Measures of central tendency and dispersion

Summary

Data will be collected from two survey instruments from a convenience sample of university students to assess stress related issues and identify coping mechanisms implemented. The University Stress Scale measured current stress levels and identified stressors as perceived by participants. The Brief COPE Inventory assessed participants stress-reducing coping strategies. Data was analyzed using descriptive statistics and measures of central tendency and dispersion were used to measure the current stress levels.

Chapter Four- Findings and Discussion

This study collected data with the purpose of measuring the perceived stress levels and identifying coping mechanisms implemented by college students. Statistical Package for Social Sciences was used to analyze descriptive statistics, frequencies and measures of central tendency and dispersion. Findings are presented by research questions in this chapter.

Demographic Characteristics of the Sample

The demographic characteristics of the sample are provided in Table 4.1. Participants were a convenience sample of 331 students from a large midwestern university. The average age of the study participants was 20.00 years old (SD=1.92). Most of the participants were female (n=192, 58.0%) with males making of a smaller percentage (n=135, 40.8%). The racial composition of the survey population was predominantly Caucasian (n=264, 79.8%), Asian (n=27, 8.2%), Black or African American (n=25, 7.6%), and Hispanic or Latino (n=5, 1.5%).

Furthermore, students were asked to provide their highest education level, most students reported being in their first semester of college (n=125, 37.8%). Students were also asked if they were international students or domestic students. More than half of the participants were domestic students (n= 295, 89.1%) while the remainder were international students (n=28, 8.5%).

Table 4.1

Demographic Information

Characteristic	n	%
Age		
18	66	19.9
19	109	32.9
20	67	20.2
21	39	11.8
22	17	5.1
23	13	3.9
24	8	2.4
25	1	.3
26	2	.6
27	1	.3
30	1	.3
31	2	.6
32	1	.3
35	2	.6
36	1	.3
37	1	.3
Gender		
Male	135	40.8%
Female	192	58.0%
Other identification	4	1.2%

Year in School		
High School Graduate	14	4.3
One Semester of College/University	125	38.0
One Year of College/University	67	20.4
Two Years of College/University	60	18.2
Three Years of College/University	51	15.5
Four or More Years of College/University	12	3.6

What are the common stressors as perceived by college students at a large Mid-Western University?

The top five most common stressors perceived by students include academic/coursework demands (n= 249, 75.7%), procrastination (n= 213, 64.4%), study/life balance (n= 198, 59.9%), finances and money problems (n= 190, 57.6%) and work (n= 95, 28.8%) Descriptive analysis was conducted to determine the common stressors perceived by the study sample. Students were asked to circle the most appropriate response for their situation. Stressor scores were recoded based on correct answers. A score of three (3) was given for "*constantly*", a score of two (2) was given for "*frequently*", a score of one (1) was given for "*sometimes*" and a score of zero (0) was given for "*not at all*" responses. *Constantly* and *frequently* scores were summated to identify the most common stressor. Using recoded data, stressor scores were computed. Table 4.2 illustrates common stressors perceived by the study sample.

Table 4.2

Scores on Perceived Stressors

	Not at all %(n)	Sometimes %(n)	Frequently %(n)	Constantly %(n)
Academic/coursework demands	1.8(6)	22.5(74)	46.8(154)	28.9(95)
Procrastination	6.6(22)	29.0(96)	40.8(135)	23.6(78)
University/college environment	30.9(102)	45.8(151)	18.5(61)	4.8(16)
Finances and money problems	12.1(40)	30.3(100)	28.8(95)	28.8(95)
Housing/accommodation	32.0(106)	40.2(133)	18.1(60)	9.7(32)
Transport	58.3(193)	28.7(95)	8.5(28)	4.5(15)
Mental health problems	53.2(176)	24.8(82)	15.1(50)	6.9(23)
Physical health problems	52.9(175)	34.7(115)	9.1(30)	3.0(10)
Parenting issues	81.2(268)	11.5(38)	4.8(16)	2.4(8)
Childcare	96.3(316)	2.1(7)	.9(3)	.6(2)
Family relationships	61.6(202)	27.7(91)	7.0(23)	3.7(12)
Friendships	43.8(144)	38.0(125)	14.6(48)	3.6(12)
Romantic relationships	42.1(139)	37.3(123)	13.6(45)	7.0(23)
Relationship breakdown	64.5(213)	23.0(76)	7.9(26)	4.5(15)
Work	40.3(133)	30.9(102)	20.9(69)	7.9(26)
Parental expectations	54.4(180)	27.2(90)	12.4(41)	6.0(20)
Study/life balance	10.9 (36)	29.3(97)	38.4(127)	21.5(71)
Discrimination	80.9(267)	12.4(41)	4.8(16)	1.8(6)
Sexual orientation issues	91.8(303)	6.4(21)	1.5(5)	.3(1)
Language/cultural issues	86.7(287)	8.5(28)	3.9(13)	.9(3)
Other demands	72.3(237)	16.8(55)	8.5(28)	2.4(8)

What are the stress-reducing coping strategies commonly used by male and female college students?

Frequency analysis was conducted to determine the coping strategies commonly used by sampled college students. Each participant had a score on each of the coping scales with the minimum value being two (2) and the maximum eight (8). Students were asked to circle the most appropriate response for their situation. Coping scores were recoded based on correct answers. A score of four (4) was given for "*I've been doing this a lot*", a score of three (3) was given for "*I've been doing this a medium bit*", a score of two (2) was given for "*I've been doing this a little bit*", and a score of one (1) was given for "*I haven't been doing this at all*", responses.

The variables were grouped into coping categories as described by Carver (1997) which include: self-distraction (1 and 19), active coping (2 and 7), denial (3 and 8), substance use (4 and 11), use of emotional support (5 and 15), use of instrumental support (10 and 23), behavioral disagreement (6 and 16), venting (9 and 21), positive reframing (12 and 17), planning (14 and 25), humor (18 and 28), acceptance (20 and 24), religion (22 and 27) and self-blame (13 and 26). Using recoded data, coping scores were computed on SPSS.

The results reveal the most common coping strategy used by the study sample was active coping; male (n=111, 82.8%), female (n=163, 86.1%). Female college students (n=148, 77.1%) were most likely to use emotional support than male students (n=65, 48.4%). Denial was the least common coping strategy used by the study sample;

male (n=20, 14.8%), female (n=22, 11.4%). Active coping had the highest mean score (m=5.0092). Table 4.3 further explains other responses.

Table 4.3

Scores on Coping Strategies (Mean and Standard Deviation scores)

	N	Mean	St.d Deviation	Minimum	Maximum
Self-distraction	329	4.9483	1.63808	2.00	8.00
Active coping	327	5.0092	1.52381	2.00	8.00
Denial	331	2.4894	.98275	2.00	8.00
Substance Use	323	3.1362	1.66626	2.00	8.00
Emotional Support	330	4.3424	1.74020	2.00	8.00
Instrumental Support	328	4.3902	1.74704	2.00	8.00
Behavioral Disagreement	328	2.8415	1.23625	2.00	8.00
Venting	324	3.5494	1.45969	2.00	8.00
Positive Reframing	321	4.7259	1.74810	2.00	8.00
Planning	328	4.8171	1.69639	2.00	8.00
Humor	331	4.0363	1.86480	2.00	8.00
Acceptance	326	4.7730	1.78472	2.00	8.00
Religion	323	3.5294	1.85706	2.00	8.00
Self Blame	329	4.0578	1.85706	2.00	8.00

Table 4.4
Scores on Coping (Percentages)

	Male(%)							Female (%)						
	2.00	3.00	4.00	5.00	6.00	7.00	8.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
Self-distraction	9.6	16.3	23.7	17.0	19.3	9.6	4.4	4.7	11.6	18.9	24.2	17.9	14.7	7.9
Active coping	5.2	11.9	24.6	24.6	18.7	8.2	6.7	2.6	11.1	28.0	18.5	20.1	13.2	6.3
Denial	70.4	14.8	8.9	2.6	3.0	.7	0	74.0	14.6	7.3	2.1	1.0	.5	.5
Substance Use	54.2	7.6	15.3	9.2	4.6	3.1	6.1	63.3	5.9	18.1	2.7	6.9	.5	2.7
Emotional	29.1	22.4	20.1	11.2	11.2	3.7	2.2	11.5	11.5	22.4	20.3	18.8	7.8	7.8
Instrumental	27.6	14.9	28.4	13.4	11.2	2.2	2.2	11.6	10.5	26.8	14.2	18.9	7.9	10.0
Behavioral	57.6	18.2	12.1	6.8	3.0	1.5	.8	56.8	21.4	9.9	7.8	3.1	.5	.5
Venting	37.7	21.5	20.0	10.8	6.9	2.3	.8	25.3	25.3	24.2	14.2	6.3	2.6	2.1
Positive R	20.8	22.3	19.2	13.1	12.3	6.2	6.2	5.3	8.6	25.7	18.2	24.1	7.5	10.7
Planning	17.2	11.9	21.6	19.4	15.0	9.0	5.2	5.8	14.2	18.9	20.5	22.1	10.5	7.9
Humor	27.4	17.0	19.3	11.9	8.9	5.2	10.4	5.3	8.6	25.7	18.2	24.1	7.5	10.7
Acceptance	20.3	7.5	19.5	17.3	19.5	6.0	9.8	9.5	11.6	23.8	20.1	18.0	7.9	9.0
Religion	48.1	12.8	15.0	9.8	6.8	3.0	4.5	44.6	11.3	16.1	11.3	5.4	2.7	8.6
Self Blame	32.3	14.3	19.5	11.3	13.5	5.3	3.8	23.4	21.4	17.2	10.4	12.5	10.9	4.2

Scores on Coping (n)

	Male							Female						
	2.00	3.00	4.00	5.00	6.00	7.00	8.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
Self-distraction	13	22	32	23	26	13	6	9	22	36	46	34	28	15
Active coping	7	16	33	33	25	11	9	5	21	53	35	38	25	12
Denial	95	20	12	3	4	1	0	142	28	14	4	2	1	1
Substance Use	71	10	20	12	6	4	8	119	11	34	5	13	1	5
Emotional	39	30	27	15	15	5	3	22	22	43	39	36	15	15
Instrumental	37	20	38	18	15	3	3	22	20	51	27	36	15	19
Behavioral	76	24	16	9	4	2	1	109	41	19	15	6	1	1
Venting	49	28	26	14	9	3	1	48	48	46	27	12	5	4
Positive R	27	29	25	17	16	8	8	10	16	48	34	45	14	20
Planning	23	16	29	26	21	12	7	11	27	36	39	42	20	15
Humor	37	23	26	16	12	7	14	10	16	48	34	45	14	20
Acceptance	27	10	26	23	26	8	13	18	22	45	38	34	15	17
Religion	64	17	20	13	9	4	6	83	21	30	21	10	5	16
Self Blame	43	19	26	15	18	7	5	45	41	33	20	24	21	8

What are the current stress levels of college students at a large Mid-Western University?

The extent score was calculated for this question. Descriptive statistics was conducted to determine the study sample's extent score of stress levels based on recorded answers. Using recorded data, scores were computed. Three (3) was the highest score given for '*'constantly''* on the scale while a score of zero (o) indicated '*'not at all*''. An extent score of >13 is predictive of significant psychological distress. Maximum possible score which reflected perceived high level of stress was sixty-three (63). The lowest possible score which reflected no knowledge of HHV-8 was zero (0). The results reveal the maximum score was 49.0, the mean score was 16.94 (SD= 8.43799). Female students

(n= 130, 67.7%) were slightly more stressed than male students (n=65, 48.1%). Figure 1 and Figure 2 illustrates these findings.

Table 4.5

Stress Levels Score

	Mean	Std. Deviation	Minimum	Maximum
Extent Score	16.94	8.43799	3.00	49.0

Table 4.6

Male and Female Stress Level Scores

	Male		Female		Other Identification	
	n	%	n	%	n	%
Stressed	65	48.1	130	67.7	1	25
Not Stressed	70	51.9	62	32.3	3	75
Total	135	100	192	100	4	100

Figure 1: Female Stress Levels

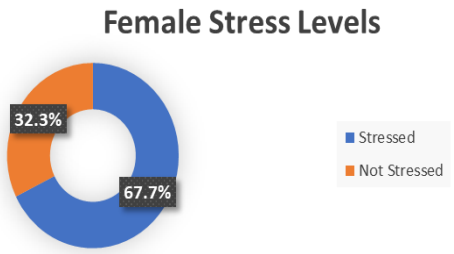
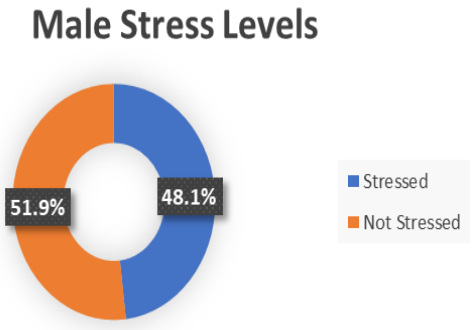


Figure 2: Male Stress Levels



Chapter Five- Summary, Conclusions and Recommendations

Examining the stress related issues perceived by college students reveal academic/coursework demands was the biggest perceived stressor amongst others. Procrastination, study/life balance, money problems and work also caused significant stress to college students. The survey results reveal college students face mental stresses at different levels. Furthermore, the study found that the coping mechanisms implemented by the students were somewhat similar and are considered healthy coping mechanisms.

Discussion and Conclusion

The researcher conducted a descriptive study, hence statistical analysis and results were descriptive in nature. The findings of this study reveal that academic/coursework demands were the greatest stressor facing college students. Over 75.5% (n=249) students found academic/coursework demands stressful. This corresponds with previous research reviewed during the literature review that identify academic demands as a significant stressor facing college students.

Procrastination (64.4%,n=213) was also a significant stressor among students. This could be due to several factors. Burnout, work demands, time pressure, social commitments and more could trigger procrastination for assignments, study time and other activities. Finances and money problems (57.6%,n=190) was also reported to be a common stressor. This illustrates the portrayal of students as consumers where they

spend more. It highlights the risk of credit card debt, tuition debt, school expenses and other money demands.

In general, it was reported female students perceived stress more than male students. The researcher assessed coping strategy frequencies among college students. The most common coping strategy among students was active coping. This finding supports Dickinson-Delaporte, & Holmes' (2011) assumption that stress activates a cognitive appraisal process, which determines coping strategies. Furthermore, Monat, Lazarus, & Reevy (2007) reported the impact of stress on students on their exams and the relationship to stress, implementing an active coping behavior which involved controlling the situation by adapting to the stressor. This behavior is also acknowledged by researchers as a problem focused behavior. Clarke (2006) stated that students had to learn to manage a stressor or the circumstance surrounding the stressor by using active coping behavior because it linked to a healthy adjustment phase.

The relationship between gender differences, stress appraisal, and coping strategy use continues to be argued. The results of this study support past research that found female college students reported feeling more stress than male students (Brougham, Zail, Mendoza, & Miller, 2009, Dusselier et al., 2005, Pierceall & Keim, 2007). Sex differences have also been found in the use of coping strategies. Literature review searches reveal female students reported greater use of emotion-focused coping strategies including expressing feelings, seeking emotional support, denial, acceptance, and positive reframing than male students (Eaton, & Bradley, 2008). This study showed denial was the least coping strategy used by both male and female students. However,

female students reported use of positive reframing, emotional support and acceptance than male students.

All the participants were undergraduate students and predominantly Caucasian. For future research, a broader scope of students should be considered which include graduate students and other races. This study utilized a convenience sample and was limited to one university in the Midwest; hence, the results may not be generalizable to other institutions in the country. Also, perceived stress and its causes were self-reported by students and that may have caused some reporting bias. Although confidentiality was guaranteed, students may have exaggerated or underreported stress or coping strategies because of fear or personal reasons. Lastly, the relationship between different levels of stress and outcomes such as academic performance, academic program and class levels was not explored.

One limitation of this study was the survey used to assess stress levels and stressors among students. The University Stress Scale was pilot tested in Australia, and its use in a study in USA may not fully reflect the major stressors facing college students in USA. Finally, a larger sample size and more statistical analysis should be done to fully measure the trends in stress and coping.

Recommendations to Health Educators

Stress levels were predominantly high among over half of the participating students, but it was positive to note students used positive coping styles to handle stressful situations. Students learning ability and motivation should be focused on, making sure that they adapt to college life and are in a good mental state. Data suggests

that students were active in dealing with stress and determined to overcome it. The most commonly used coping strategies by both male and female students strengthens the importance of providing information and awareness to students regarding stress management.

Continuous awareness on this topic may be beneficial in preventing stress related illness and the risk of engaging in unhealthy coping. Regular workshops for students on stress and time management is essential and health educators must reinforce the importance of maintaining a healthy lifestyle, engaging in physical activity and social support. The more students know about various coping strategies the more likely they were to practice healthy coping behaviors. Student support resources in the form of physical activity (yoga classes), counselling and guidance are particularly recommended. Establishing a wellness clinic and setting up student counselling centers within campus with the help of mental health professionals can be given as an early intervention to help affected students.

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Appendix A

Assessment of Stress Related Issues & Coping Mechanisms among College Students

Part A: Information About You

Directions: Please respond to the following questions.

1. What is your age? _____ Years (please write your age in the space provided)
2. What is your gender (please circle appropriate response)
   a. Male b. Female c. Other identification
3. Are you an international student? A. Yes b. No (please circle appropriate response)
4. What highest level of education have you completed? Please check one.
   a. High School Graduate
   b. One Semester of College/University
   c. One Year of College/University
   d. Two Years of College/University
   e. Three Years of College/University
   f. Four or More Years of College/University
5. What is your racial ethnicity?
   a. Asian
   b. Black or African American
   c. White
   d. Hispanic or Latino
   e. American Indian or Alaska Native

Part B. University Stress Scale Survey Instrument

University Stress Scale

How often have each of the following caused you stress over the past month? If any are not applicable to you, tick *Not at all*.

		Not at all	Sometimes	Frequently	Constantly
1	Academic/coursework demands	0	1	2	3
2	Procrastination	0	1	2	3
3	University/college environment	0	1	2	3
4	Finances and money problems	0	1	2	3
5	Housing/accommodation	0	1	2	3
6	Transportation	0	1	2	3
7	Mental health problems	0	1	2	3
8	Physical health problems	0	1	2	3
9	Parenting issues	0	1	2	3
10	Childcare	0	1	2	3
11	Family relationships	0	1	2	3
12	Friendships	0	1	2	3
13	Romantic relationships	0	1	2	3
14	Relationship break-down	0	1	2	3
15	Work	0	1	2	3
16	Parental expectations	0	1	2	3
17	Study/life balance	0	1	2	3
18	Discrimination	0	1	2	3
19	Sexual orientation issues	0	1	2	3
20	Language/cultural issues	0	1	2	3
21	Other demands	0	1	2	3

Part c. Brief COPE Survey Instrument

Brief COPE

These items deal with ways you've been coping with the stress in your life enrolled as a college student. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a way of coping. Don't answer based on whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to

rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

		I haven't been doing this at all	I've been doing this a little bit	I've been doing this a medium bit	I've been doing this a lot
1	I've been turning to work or other activities to take my mind off things.	1	2	3	4
2	I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3	I've been saying to myself "this isn't real.".	1	2	3	4
4	I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5	I've been getting emotional support from others.	1	2	3	4
6	I've been giving up trying to deal with it.	1	2	3	4
7	I've been taking action to try to make the situation better.	1	2	3	4
8	I've been refusing to believe that it has happened.	1	2	3	4
9	I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10	I've been getting help and advice from other people.	1	2	3	4
11	I've been using alcohol or other drugs to help me get through it.	1	2	3	4
12	I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
13	I've been criticizing myself.	1	2	3	4
14	I've been trying to come up with a strategy about what to do.	1	2	3	4
15	I've been getting comfort and understanding from someone.	1	2	3	4
16	I've been giving up the attempt to cope.	1	2	3	4
17	I've been looking for something good in what is happening.	1	2	3	4
18	I've been making jokes about it.	1	2	3	4
19	I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20	I've been accepting the reality of the fact that it has happened.	1	2	3	4
21	I've been expressing my negative feelings.	1	2	3	4
22	I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4

23	I've been trying to get advice or help from other people about what to do.	1	2	3	4
24	I've been learning to live with it.	1	2	3	4
25	I've been thinking hard about what steps to take.	1	2	3	4
26	I've been blaming myself for things that happened.	1	2	3	4
27	I've been praying or meditating.	1	2	3	4
28	I've been making fun of the situation	1	2	3	4

Appendix B

MINNESOTA STATE UNIVERSITY
MANKATO

March 24, 2018

Dear Mark Windschitl:

Re: IRB Proposal entitled "[1211976-1] Assessment of Stress Related Issues & Coping Mechanisms among College Students"
Review Level: Level *[I]*

Your IRB Proposal has been approved as of March 24, 2018. On behalf of the Minnesota State University, Mankato IRB, we wish you success with your study. Remember that you must seek approval for any changes in your study, its design, funding source, consent process, or any part of the study that may affect participants in the study (see https://grad.mnsu.edu/irb/revision.html). Should any of the participants in your study suffer a research-related injury or other harmful outcome, you are required to report them to the Associate Vice-President of Research and Dean of Graduate Studies immediately.

When you complete your data collection or should you discontinue your study, you must submit a Closure request (see https://grad.mnsu.edu/irb/closure.html). All documents related to this research must be stored for a minimum of three years following the date on your Closure request. Please include your IRBNet ID number with any correspondence with the IRB.

Sincerely,

Mary Hadley, Ph.D.
IRB Coordinator

Jeffrey Buchanan, PhD
IRB Co-Chair

Julie Carlson, Ed.D.
IRB Co-Chair

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Minnesota State University, Mankato IRB's records.

Appendix C

Informed Consent Form

You are invited to participate in this research study conducted by Emeka Okoro under the guidance of Dr. Mark Windschitl in the department of Health Science on Assessment of Stress Related Issues and Coping Mechanisms among College Students. The surveys should take about 5-10 minutes to complete. The purpose of the research is to measure the perceived stress levels and understand coping mechanisms implemented by college students. You will be asked to read and circle the most appropriate response for your situation. The risks you will encounter as a participant in this research are not more than experienced in your everyday life. There are no direct benefits to you as a participant.

Responses will be anonymous and confidential. None of your answers will be released and no names will be recorded. Original surveys will be kept in the principal investigator's locked office for three years, at which time they will be shredded on May 5th, 2021. All data will be stored on a password protected computer. Further, only the primary investigator and student investigator will have access to the data.

If you have any questions about this research, please contact Dr. Mark Windschitl at 507-389-5392 or at mark.windschitl@mnsu.edu. If you have any questions about the participants' rights and for research-related injuries, please contact the Administrator of the Institutional Review Board, at 507-389-1242. Participation is voluntary. The decision whether or not to participate will not affect your relationship with Minnesota State University, Mankato, and refusal to participate will involve no penalty or loss of benefits.

Individuals may discontinue participation at any time before the data collection is complete without penalty or loss of benefits. If you choose not to participate, just submit a blank survey. Returning the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age. Please keep a copy of this page for your future reference.

MSU IRBNet #: 1211976 Date of MSU IRB approval: 3/24/2018